

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

To:

WINTER, Konrad T. WINTER, BRANDL, FÜRNISS, HÜBNER
WINTER BRANDL FÜRNISS HÜBNER
RÖSS KAISER POLTE - PARTNERSHIP -
Bavariaring 10 MÜNCHEN
80336 München
ALLEMAGNE

Eing.: 01. Juli 2005 *hw*

FS
PO
KW
DD
RS

Date of mailing
(day/month/year) 30.06.2005

Applicant's or agent's file reference 88TY1311
REPLY DUE within 2 month(s)
from the above date of mailing

International application No. PCT/IB2004/003090	International filing date (day/month/year) 23.09.2004	Priority date (day/month/year) 25.09.2003
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International Patent Classification (IPC) or both national classification and IPC
B60C23/04, B60B23/04

Applicant
TOYOTA JIDOSHA KABUSHIKI KAISHA et al.

- ☒ The written opinion established by the International Searching Authority:
☒ is ☐ is not
considered to be a written opinion of the International Preliminary Examining Authority
- This second report contains indications relating to the following items:
 - ☒ Box No. I Basis of the opinion
 - ☐ Box No. II Priority
 - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☒ Box No. IV Lack of unity of invention
 - ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Box No. VI Certain documents cited
 - ☒ Box No. VII Certain defects in the international application
 - ☐ Box No. VIII Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).
How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.
Also: For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6. For an additional opportunity to submit amendments, see Rule 66.4.
If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the International preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 25.01.2006

Name and mailing address of the International preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Billen, K

Telephone No. +49 89 2399-7020



**WRITTEN OPINION OF THE INTERNATIONAL
PRELIMINARY EXAMINING AUTHORITY**

International application No.
PCT/IB2004/003090

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this opinion is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed")*:

Description, Pages

1-23 as originally filed

Claims, Numbers

1-24 filed with the demand

Drawings, Sheets

1/9-9/9 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

**WRITTEN OPINION OF THE INTERNATIONAL
PRELIMINARY EXAMINING AUTHORITY**

International application No.
PCT/B2004/003090

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. .

Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-21
	No: Claims	22-24
Inventive step (IS)	Yes: Claims	1-21
	No: Claims	22-24
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations:

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item IV

IV.1 Document D4, which is considered to represent the most relevant state of the art, discloses a vehicle wheel information processing device comprising: a plurality of vehicle wheel communication devices (10) which are provided at a single vehicle wheel (col. 8, lines 62-65) and which are not connected to each other; and a vehicle body communication device (80) that communicates with the plurality of vehicle wheel communication devices; wherein a transmission pattern (Fig. 10) of a signal transmitted from each of the vehicle wheel communication devices (10) is set to be different to the transmission pattern of each other signal.

IV.2 When considering the cited prior art (D4) the following inventions, being characterized by their Special Technical Features (Rules 13(1) and 13(2) PCT) and making a contribution over this prior art and solving individual problems, can be identified:

Invention I (claims 1-12, 22-24)

The transmission patterns differ from each other in such a manner that signals of two or more vehicle wheel communication devices do not overlap each other, when requested at the same time.

Invention II (claims 13-21)

A second vehicle wheel communication device transmits an identification number for the second vehicle wheel communication device to the vehicle body communication device via the first vehicle wheel communication device.

Both inventions provide alternatives to avoid signal interference. The general problem of signal interference is known and a solution is given in prior art document D6.

Consequently, neither the objective problems underlying the subjects of each invention, nor their solutions defined by the technical features, allows for a relationship to be established between the said inventions, based on a single general

inventive concept.

Therefore, the 2 groups of claims are not linked by common or corresponding special technical features and thus define 2 different inventions not linked by a single general inventive concept.

The application does not therefore meet the requirement of Unity of Invention as defined in Rule 13(1) & 13(2) PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 Prior Art

Reference is made to the following documents:

D1: GB-A-2 361 546

D4: US-A-6 087 930

D6: EP1336511 A1

D6 was not cited in the international search report. A copy thereof is appended hereto.

V.2 Independent Claims 1 and 13

It appears that the subject-matter of claims 1 and 13 fulfils the requirements of Article 33(2) PCT.

V.3 Independent Claim 22

As already mentioned in the "Written Opinion of the Searching Authority" the subject-

matter of claims 22-24 is not new in the sense of Article 33(2) PCT.

The combination of the following features is neither known from, nor rendered obvious by, the available prior art:

" a first step in which respective signals of each of the vehicle wheel communication devices are wirelessly transmitted to a vehicle body communication device using a transmission pattern that is different for each vehicle wheel communication device *in such a manner that the signals of two or more vehicle wheel communication devices do not overlap each other, when requested at the same time.*"

It is suggested therefore that a new independent method claim be drafted to include these features, bearing in mind that the features known in combination from the closest prior art (D4) should be placed in the preamble of such a claim in accordance with Rule 6.3(b) PCT.

Re Item VII

1. The features of the claims have not been provided with reference signs in parenthesis (Rule 6.2 b) PCT).
2. The Independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D4) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1, D4 and D6 is not mentioned in the description, nor are these documents identified therein.